1:Vaillant A-5 (1928-1936)1941 NU7 Aztec NU7

556 555 fully worked utensils and tools and well-tended and productive fields, while an unsuccessful man had a small and miserable equipment. Yet except for the intervention of natural disaster the differential was largely due to the ability of a man and his household to produce with their own hands the symbols of his wealth or to exchange his specialized product for equivalent superior equipment made by others. The entrepreneur and broker had small place in the undertaking of production and its distribution.[1]

771 The gods also stimulated good craftsmanship. Every home had an altar, and every act was accomplished through the favor of some deity. Ceremonies to appease these custodians of natural force were of frequent occurrence. Thus the use of symbols, referring to the god whose favor was sought, came to exercise an important influence on design. Since a man does reverence with his most esteemed social attitudes and his best material possessions, each household must try to surpass its previous efforts to honor the gods. The temple equipment, therefore, tended to represent the cream of local craftsmanship.

324 Work in stone, the most durable natural substance available, is a common gauge of human ability. Since the tools last forever, it is possible to compare the technical abilities of peoples over an enormous span of human history. However, for basic equipment like projectile points, axes, grinding stones, and the like, satisfactory forms are reached fairly early and do not change in proportion to cultural advances in other directions. Thus the arrow or the dart points of Aztec times were not technically better than those used by the Middle Culture peoples. However, the technical demands of the sacrificial cult called for a heavy broad-bladed flint

1:Vaillant A-5 (1928-1936)1941 NU7 Aztec NU7

that could tear through human flesh at a single stroke, and this type of knife, not found in earlier horizons, was produced commonly with the extra care in chipping which is to be expected in a ceremonial object. (See Plate 16.)

The three-legged *metate*, or grinding stone, was not better made in Aztec times than before. In Middle Culture and Toltec times it had an edge, so that the *metlapil* (son of the *metate*, i.e., *mano*, or grinding stone) was beveled and fitted within the confined space. The Aztec *metate* was flat, and the *mano* had swollen handles, projecting on either side of the grinding surface of the *metate*. I have never had the misfortune to break my back grinding corn in a *metate*, so that I have no way of knowing whether this represents a technical advance or a mere change in style.

The demands of ritual necessitated stone boxes for burning and storing human hearts. These boxes were pecked out of lava and lavishly decorated inside and out with reliefs, referring symbolically to the gods for whom the sacrifice was made. Some of these eagle cups (cuauhxicalli*) fall into that area of superior craftsmanship we designate in our own culture by the term "fine art." The great circular cup, ordered by Tizoc and miscalled the Sacrificial Stone, eight feet in diameter and two and one half feet thick, attained the stature of a monument. Stone incense burners, often in the form of the Old God, were common in Toltec and rare in Upper Middle Culture times. The quantity of religious sculpture, produced chiefly in late Aztec times, to judge from the style, did not detract from the quality of the workmanship, so strong was the control of religious and social factors.[2] (See Plate 55, bottom right.)

*kwow-shee-cal'li.

1:Vaillant A-5 (1928-1936)1941 NU7 Aztec NU7

317 Obsidian must have had important economic value for the
439 Valley peoples, and since volcanic glass is portable and very
324 useful for its sharp cutting edge, it was widely traded to the tribes of nonvolcanic regions. Techniques were established early in the Middle Culture, and the art of polishing this stone was known to the Teotihuacan Toltecs, who utilized it as eyes for the idols of the Temple of Quetzalcoatl. Ceremonial
[788] bloodletting called for a constant supply of thin blades (made by pressure flaking), some of which are exquisitely long and narrow. Yet scalpels of comparable fineness were made in Toltec and Mazapan times as well. Indeed, the principal
[415] innovation of the Aztecs was in fashioning vases from obsidian, a formidable task, owing to its hardness.[3]

303 The making of mirrors called much ingenuity into play.
789 They are so rare that they must have been used solely for ritualistic magic. Blocks of obsidian were sometimes polished to produce an eerie and mysterious reflection. However, iron pyrites, burnished and shaped, were more common; and rarer examples had thin pyrite flakes laid in a mosaic and glued to a background of wood or shell. In another technique used on the coast the artisan detached a surface of pyrites in its matrix of slate, burnishing one side and carving
[395] the other to fashion a mirror with a carved back. One example, at least, is known of a mirror of marcasite with its surface so ground as to produce a magnified reflection.[4]

● 324 Stone sculpture we shall consider more conveniently under art, but the mass production of dressed stone for building must have required patience and skill to accomplish. Stoneworking throughout Middle America was achieved without metal tools. Flaking and chipping for the hard stones, pecking and hammering for the softer ones, were the preliminary

1:Vaillant A-5 (1928-1936)1941 NU7 Aztec NU7

steps in every case. A final polishing with some simple abrasive like water and sand often completed the process. Some hard stones seem to have been detached from their matrix by applying the abrasive and sawing with a cord of rawhide or a tool of harder stone. The Middle American people also developed tubular drills of bone and reed, which, rotated by a bow and aided by an abrasive, could hollow out vases or bore out places that were otherwise inaccessible to the clumsy tools of the time.[6]

Save for descriptions and drawings, the destruction of time and man has left us only a few examples of the weaver's art. Weaving of some kind is very old, and no people, however primitive, exist in the world today who do not make at least some kind of basketry. Textiles are made as a rule by higher groups, but they are found in the American continent as part of the material equipment of peoples who had not yet learned how to make pottery. An early example of cloth, combining threads of cotton with some fiber like yucca, was found in the Lower Middle Culture horizon of Zacatenco.

The long practice of weaving must and did have a significant effect on decoration, for the rectangular patterns, to which the weaver is confined, influence all of Indian art in Continental America. Design and the arrangement of elements are more important than form in Indian art. While many geometrical patterns appear in pictures of Aztec clothing, fine embroidery could produce the effect of curvilinear designs or even naturalistic patterns drawn from the regional flora. Batik and tie dyeing also enriched the decoration of Aztec clothing. Other processes produced the effect of velvet and brocade, and some garments even imitated in tex-

1:Vaillant A-5 (1928-1936)1941 NU7 Aztec NU7

286 ture and pattern the skins of animals. Judged on a visual
531 basis, the designs on Aztec clothing were by no means inferior to those of the celebrated textile art of Indian Peru. However, we have no positive evidence that technical development of Aztec weaving was equal to Peruvian, for those ancient South American weavers knew and practiced every method known to man and even a few unique to themselves.[6] (See Plates 33–36; 62, bottom left; 64.)

287 Feather mosaic is probably an old craft, since evidence seems to show that it was known to the Upper Middle Cultures. Feather- and the technically allied fur-cloth appear in primitive horizons in North America. The process consisted in tying the stems of feathers into a fabric during the weaving process. Featherworkers adorned shields in this way, dispersing the feathers to represent animals or else purely decorative designs. They made cloaks, too, and created sumptuous insignia worn on the head or harnessed to the body. In these objects the blending of colors was so delicate and perfect as to rival paintings. As late as the nineteenth century, although the art had declined, the Mexicans still depicted landscapes and scenes from daily life in this medium, and today they make charming pictures for the tourists with cardboard, feathers and glue.[7] (See Plate 45.)

321 Feather mosaic had an early counterpart in stone and
324 shell; we found a turquoise mosaic in a Lower Middle Culture grave. The wooden handles of sacrificial knives were sometimes ornamented in this way, as were masks, shields and even small gold ornaments. A *tour de force* of the mosaic worker is a wooden shield from the Mixteca, on which little pieces of turquoise were fitted together in a relief sculpture depicting a religious scene.[8] (See Plates 48; 60, bottom right.)

1:Vaillant A-5 (1928-1936)1941 NU7 Aztec NU7

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PLATE 48

AZTEC MOSAIC WORK

Mosaic work was one of the most elegant crafts and demands color reproduction to give a just impression. The mask in jade and turquoise, now in Rome, was part of the original loot of the Conquest. The skull (*below*), a British Museum treasure, is composed of light bands of turquoise and dark ones of lignite, set on a human skull, cut away in back to form a mask, possibly representing Tezcatlipoca.

[p. 144 (D)]

1:Vaillant A-5 (1928-1936)1941 NU7 Aztec NU7

Mosaic workers utilized stones of different colors and shells of various kinds. Pure designs were common, but elements representing the costume or the body paint were shown when the mosaic covered a figure in wood or stone. An application of mosaic on a larger scale was frequent in architecture, a veneer of cut stone being applied to the rubble of a platform or building. The temples of Mitla, Oaxaca, influenced by the same Mixteca-Puebla culture to which Aztec civilization owed its origin, are masterpieces of this technique, for individual blocks have their surfaces carved to fit together in an intricate geometric design.[9] (See Plate 11, bottom.)

The woodworkers, owing to the impermanence of their medium, have left little to exhibit their prowess, but the few surviving masks, idols, drums and *atl-atls*, or throwing boards, bear ample witness to their superb craftsmanship. The very fact that they had to work wood with stone tools makes their achievement noteworthy. Their copper tools were dull and unserviceable in cutting even the softer woods, and these implements came into use relatively late in Aztec times.[10] (See Plate 54, bottom.)

Wood was used extensively in buildings for roof beams and doorjambs. A beam in the palace at Texcoco was ninety feet long and five feet thick, so that its preparation and transport must have been an arduous task. There was probably little use of planks in Aztec building, since it would be difficult to prepare them with the rudimentary equipment at Aztec disposal, and adobes and plaster were easier to make and just as serviceable. Wooden canoes, however, were essential for life in the lakes. Some were dugouts hollowed out by fire, but others, to judge from the type used by the Xochimilcan

1:Vaillant A-5 (1928-1936)1941 NU7 Aztec NU7

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PLATE 49

AZTEC ART

Porphyry mask, Tenyo, Vera Cruz. This mask is an outstanding example of Aztec art, even though it was made outside of the borders of their domain. This carving and the Eagle Knight on Plate 50 are perhaps the finest secular sculptures from the Aztec period.

[p. 160(A)]

1:Vaillant A-5 (1928-1936)1941 NU7 Aztec NU7

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PLATE 52

AZTEC ART

TOP: The Calendar Stone, thirteen feet in diameter, represents the history of the world. It is arranged in concentric circles, at the center of which is the sun set within the sign Four Motion, the date of the present era. The dates of the preceding eras are given in the four arms of the Motion sign. The twenty day names encircle the central symbols, and they are enclosed by glyphs for turquoise and jade, signifying "precious" and the color of the heavens. Beyond this band radiate sun's rays and war symbols, while the outer border consists of two great fire snakes, symbolizing time. BOTTOM: The National Stone, a monolithic block in the Mexican National Museum, suggests how the Calendar Stone was probably set up as a pinfocus. Its symbolism represents the Sacred War, the eternal conflict between the contrasting and opposing forces of nature.

[P. 160(D)]

1:Vaillant A-5 (1928-1936)1941 NU7 Aztec NU7

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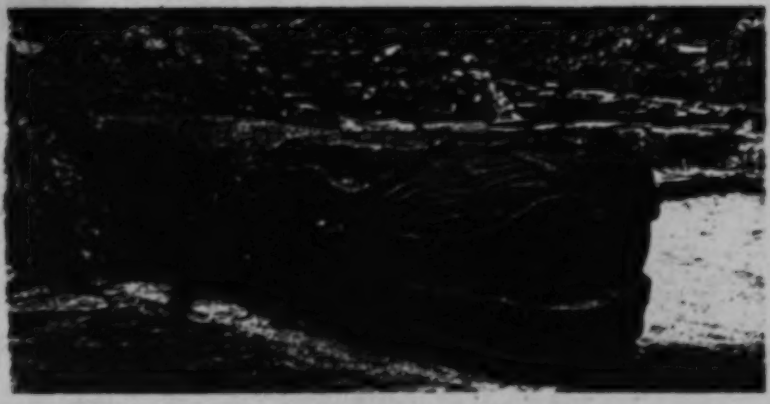

PLATE 53

AZTEC ART

TOP: This feathered snake in the Mexican National Museum may well symboline Quetzalcoatl, God of Learning and the Priesthood. This representation differs from the fire snake in that it lacks a raised crest over the head. BOTTOM: The enormous snake at the foot of the balustrade to the great temple in Mexico is a dramatic architectural ornament, frequently employed in Aztec temple building. Snakes were the major ornament at Tenayuca (Plate 50, above) and many other Aztec buildings, appearing also far to the east in Mexican Chichen Itza.

[p. 160(E)]

1:Vaillant A-5 (1928-1936)1941 NU7 Aztec NU7

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PLATE 54

AZTEC ART

TOP: Coatlicue, the Mother of the Gods, a highly important member of the pantheon. This representation, over eight feet high, displays her power in terms of such fearsome attributes as two snakeheads, a necklace of a skull, hands and hearts, a skirt of writhing snakes and claws on her feet. The bottom of the statue's feet is carved to represent the earth monster. BOTTOM: Wooden drum with two tongues (*teponaztli*) in the form of an ocelot. The smooth, simple outlines contrast with the macabre congestion of the presentation above.

[p. 160(F)]

1:Vaillant A-5 (1928-1936)1941 NU7 Astec NU7

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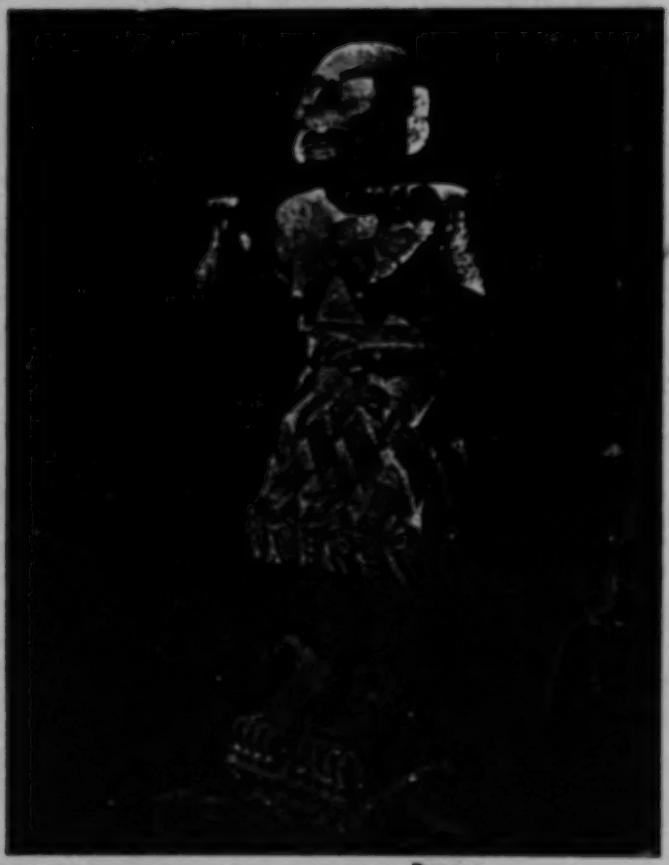

PLATE 55
AZTEC ART

TOP: Another presentation of Coatlicue, the Mother of the Gods. An earth goddess, she is also associated with death, so that in this case her head is a human skull. BOTTOM: *Left:* Small rock-crystal skull representing the Death God. This is a fine example of Aztec lapidary work. *Right:* A box, symbolically carved, to hold human hearts. Note the glyph for jade, i.e., "precious," banding the sides of the container.

[p. 160(G)]

1:Vaillant A-5 (1928-1936)1941 NU7 Aztec NU7

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PLATE 56

AZTEC ART

TOP: This Corn Goddess is envisaged as a young girl. Her soft Indian beauty is brought out with the same stern simplicity which charcterizes the warriors on Plates 40 and 49. BOTTOM: A colossal head, nearly four feet high, of Coyolxauhqui, sister of the War God. She is shown dead. Simple handling of details enhances this monumental conception.

[p. 160(H)]

1:Vaillant A-5 (1928-1936)1941 NU7 Aztec NU7

carved from the solid rock cliff and is a marvelous blend of architectural design and sculptural skill.[8]

The Aztec sculptors worked in relief and in the round, in heroic and in miniature size, and were equally able in symbolic and naturalistic conceptions, which they could execute in whatever medium was available. Our modern appreciation of their work is hampered by the prominence of religious *motifs*, which often detract by crowded detail or grotesque fantasy from the clean lines of their basic proportions. Aztec art, we have insisted, was never completely secular. Yet, in compensation, the Aztecs allowed a lively appreciation of natural elements to enter purely religious conceptions wherever possible.

From the time of the Middle Cultures the Mexicans used baked clay extensively for sculpture and worked out in it their artistic standards. The few surviving examples of wooden sculpture suggest that this medium was carved in accordance with stone techniques and did not, as in Egypt and Greece, serve as a training ground for standards later transferred to stone. If anything, the plastic methods of Mexico had their origin in a long and continuous handling of clay. Both media entail an emphasis on surface and contour; and the technical process of reducing stone by pecking and polishing, if more laborious, is not, in the last analysis, very different from the final smoothing and finishing of a work in clay. Thus the sculptors achieved a delicate appreciation of the contours and lines of the human form.

Partly owing to the past tradition and partly because the images of the gods were set in the temples, the Aztec artists showed their figures in passive attitudes, more often seated than erect. The austerity of their life led the Aztecs to

11:Diaz T,H-5 (1519-1520) 1910
NU7 Aztec NU7

deer, mallards, young dogs and other things of that sort in their part of the market, and let us also mention the fruiterers, and the women who sold cooked food, dough and tripe in their own part of the market; then every sort of pottery made in a thousand different forms from great water jars to little jugs, these also had a place to themselves; then those who sold honey and honey paste and other dainties like nut paste, and those who sold lumber, boards, cradles, beams, blocks and benches, each article by itself, and the vendors of *ocote*[1] firewood, and other things of a similar nature. I must furthermore mention, asking your pardon, that they also sold many canoes full of human excrement, and these were kept in the creeks near the market, and this they use to make salt or for tanning skins, for without it they say that they cannot be well prepared. I know well that some gentlemen laugh at this, but I say that it is so, and I may add that on all the roads it is a usual thing to have places made of reeds or straw or grass, so that they may be screened from the passers by, into these they retire when they wish to purge their bowels so that even that filth should not be lost. But why do I waste so many words in recounting what they sell in that great market, for I shall never finish if I tell it all in detail. Paper, which in this country is called *Amal*, and reeds scented with *liquidambar*, and full of tobacco, and yellow ointments and things of that sort are sold by themselves, and much cochineal is sold under the arcades which are in that great market place, and there are many vendors of herbs and other sorts of trades. There are also buildings where three magistrates sit in judgment, and there are executive officers like *Alguacils* who inspect the merchandise. I am forgetting those who sell salt, and those who make the stone knives, and how they split them

[1] Pitch-pine for torches

11:Diaz T,H-5 (1519-1520) 1910
NU7 Aztec NU7

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off the stone itself; and the fisherwomen and others who sell some small cakes made from a sort of ooze which they get out of the great lake, which curdles, and from this they make a bread having a flavour something like cheese. There are for sale axes of brass and copper and tin, and gourds and gaily painted jars made of wood. I could wish that I had finished telling of all the things which are sold there, but they are so numerous and of such different quality and the great market place with its surrounding arcades was so crowded with people, that one would not have been able to see and inquire about it all in two days.

Then we went to the great Cue, and when we were already approaching its great courts, before leaving the market place itself, there were many more merchants, who, as I was told, brought gold for sale in grains, just as it is taken from the mines. The gold is placed in thin quills of the geese of the country, white quills, so that the gold can be seen through, and according to the length and thickness of the quills they arrange their accounts with one another, how much so many mantles or so many gourds full of cacao were worth, or how many slaves, or whatever other thing they were exchanging.

Now let us leave the great market place, and not look at it again, and arrive at the great courts and walls where the great Cue stands. Before reaching the great Cue there is a great enclosure of courts, it seems to me larger than the plaza of Salamanca, with two walls of masonry surrounding it and the court itself all paved with very smooth great white flagstones. And where there were not these stones it was cemented and burnished and all very clean, so that one could not find any dust or a straw in the whole place.

When we arrived near the great Cue and before we had ascended a single step of it, the Great Montezuma sent

13: Phillips U-4 (no date) 1925
NU7 Aztec NU7
Tarasco NU34
Zapotec NU44

The Aztec people had, however, some knowledge of metallurgy, for they melted the copper and cast it in moulds, an art which the aborigines in the United States never seem to have acquired. Cortez tells us that in the markets of the City of Mexico

> "hatchets were sold made of copper alloyed with tin and that this alloy was used with a silicious powder with which they cut the hardest stones."

The Spanish historians speak of Cholula, a very ancient City of Mexico, founded before the arrival of the Aztec, which excelled in metal working, and that the Tarascans living west of the valley of Mexico were familiar with copper found in the mountains in that district, which they worked into defensive armor, body plates of wood covered with sheet copper. They also state that the Zapotec made ornaments of copper obtained from the mines in Oaxaca.

Copper implements, however, were not common near the City of Mexico but were plentiful in Oaxaca, Michoacan, and the Jalisco region. The T-shaped implements were found at Mitla, Central America, being abundant in the Zapotec country. The objects, some made of very thin sheet copper, others heavier, possibly cast, are of uncertain use; those too thin to be used as tools for wood or stone, are thought to be instruments used in their feather work or pottery, others regard them as a money currency or exacted as tribute paid to the City of Mexico by the neighboring cities, this latter being the general opinion.

The number as well as the variety of copper objects from Mexico found in our Museum collections, is rather limited, consisting of a few copper ax heads, chisels, large and small, little bells, finger rings, beads and pins. The peculiar T-shaped objects are the most abundant, differing somewhat in shape and size. An analysis of one of them in the Peabody Museum at Cambridge, proved it to be simply copper. It was doubtful if the ancient Aztec had a knowledge of bronze or knew how to obtain it until shown by the Spanish invaders, and such analyses of Mexican metal objects, giving a percent of tin to indicate a true bronze, may have been implements made after the instruction by the Spaniards. Some copper tools from Mexico when analyzed showed a small amount of tin believed to have been an impurity in the